

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) An alkali-free aluminoborosilicate glass
consisting of by weight % based on oxide,

SiO ₂	> 58 – 65,
B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – 1.5,
BaO	> 1.5 – 6,
with SrO + BaO	> 3, and
ZnO	0 – < 2,

and essentially no alkali oxides.

2. (Previously Presented) An alkali-free aluminoborosilicate glass
consisting of by weight % based on oxide,

SiO ₂	> 58 – 65,
B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – < 4,
BaO	> 2.5 – 6,
with SrO + BaO	> 3, and
ZnO	0 – 0.5,

and essentially no alkali oxides.

3. (Previously Presented) An aluminoborosilicate glass according to Claim 1, containing at most 5% by weight MgO based on oxide.

4. (Previously Presented) An aluminoborosilicate glass according to Claim 1, containing at least 60% by weight SiO₂ based on oxide.

5. (Previously Presented) An aluminoborosilicate glass according to Claim 1, containing more than 11% by weight MgO, CaO, SrO and BaO together based on oxide.

6-7. (Cancelled)

8. (Original) An aluminoborosilicate glass according to claim 1, having a ratio of MgO/CaO by weight of less than 1.

9. (Original) An aluminoborosilicate glass according to claim 1, having a ratio of MgO/CaO by weight of less than 0.7.

10. (Previously Presented) An aluminoborosilicate glass according to claim 1, containing at least 5% by weight CaO based on oxide.

11. (Previously Presented) An aluminoborosilicate glass according to claim 1, containing > 7 to \leq 11% by weight B₂O₃ based on oxide.

12. (Previously Presented) An aluminoborosilicate glass according to claim 1, containing > 2.5% to \leq 5% by weight BaO based on oxide.

13. (Cancelled)

14. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

SiO ₂	> 58 – 65,
B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – 1.5,
BaO	> 1.5 – 6,
with SrO + BaO	> 3, and
ZnO	> 0 – \leq 0.5,

and essentially no alkali oxides.

15. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

<chem>SiO2</chem>	> 58 – 65,
<chem>B2O3</chem>	> 6 – 11.5,
<chem>Al2O3</chem>	> 14 – 20,
<chem>MgO</chem>	> 3 – 6,
<chem>CaO</chem>	> 4.5 – 10,
<chem>SrO</chem>	0 – 1.5,
<chem>BaO</chem>	> 1.5 – 6,
with <chem>SrO + BaO</chem>	> 3, and
<chem>ZnO</chem>	> 0 – ≤ 1.5,

and essentially no alkali oxides.

16. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

<chem>SiO2</chem>	> 58 – 65,
<chem>B2O3</chem>	> 6 – 11.5,
<chem>Al2O3</chem>	> 14 – 20,
<chem>MgO</chem>	> 3 – 6,
<chem>CaO</chem>	> 4.5 – 10,
<chem>SrO</chem>	0 – 1.5,
<chem>BaO</chem>	> 1.5 – 6,
with <chem>SrO + BaO</chem>	> 3,
<chem>ZnO</chem>	0 – < 2,
<chem>ZrO2</chem>	≤ 0.5, and
<chem>TiO2</chem>	≤ 0.5,

and essentially no alkali oxides.

17. (Previously Presented) An aluminoborosilicate glass according to Claim 2, containing at most 5% by weight MgO based on oxide.

18. (Previously Presented) An aluminoborosilicate glass according to Claim 2, containing at least 60% by weight SiO2 based on oxide.

19. (Previously Presented) An aluminoborosilicate glass according to Claim 2, containing more than 11% by weight based on oxide MgO, CaO, SrO and BaO is greater together.

- 20-21. (Cancelled)

22. (Original) An aluminoborosilicate glass according to claim 2, having a ratio of MgO/CaO by weight of less than 1.

23. (Original) An aluminoborosilicate glass according to claim 2, having a ratio of MgO/CaO by weight of less than 0.7.

24. (Previously Presented) An aluminoborosilicate glass according to claim 2, containing at least 5% by weight CaO based on oxide.

25. (Previously Presented) An aluminoborosilicate glass according to claim 2, containing > 7 to \leq 11% by weight B₂O₃ based on oxide.

26. (Previously Presented) An aluminoborosilicate glass according to claim 2, containing > 2.5% to \leq 5% by weight BaO based on oxide.

27. (Cancelled)

28. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

SiO ₂	> 58 – 65,
B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – < 4,
BaO	> 2.5 – 6,
with SrO + BaO	> 3, and
ZnO	> 0 – \leq 0.5,

and essentially no alkali oxides.

29. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

SiO ₂	> 58 – 65,
B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – 1.5,
BaO	> 1.5 – 6,
with SrO + BaO	> 3, and
ZnO	> 0 – ≤ 2.0,

and essentially no alkali oxides.

30. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

SiO ₂	> 58 – 65,
B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – < 4,
BaO	> 2.5 – 6,
with SrO + BaO	> 3,
ZnO	0 – 0.5,
ZrO ₂	≤ 0.5, and
TiO ₂	≤ 0.5,

and essentially no alkali oxides.

31. (Previously Presented) An aluminosilicate glass according to claim 2, containing up to 3% by weight SrO based on oxide.

32. (Original) A substrate glass in thin-film photovoltaics or a display comprising an alkali-free aluminoborosilicate glass according to claim 1.

33. (Original) A TFT display or a thin-film solar cell comprising an alkali-free aluminoborosilicate glass according to claim 1.

34. (Original) A substrate glass in thin-film photovoltaics or a display comprising an alkali-free aluminoborosilicate glass according to claim 2.

35. (Original) A TFT display or a thin-film solar cell comprising an alkali-free aluminoborosilicate glass according to claim 2.

36-47. (Cancelled)

48. (Previously Presented) An aluminoborosilicate glass according to claim 1 that has a density of less than 2.6 g/cm³.

49. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

SiO ₂	> 58 – 65,
B ₂ O ₃	> 6 – 11.5,
Al ₂ O ₃	> 14 – 20,
MgO	> 3 – 6,
CaO	> 4.5 – 10,
SrO	0 – 1.5,
BaO	> 1.5 – 6,
with SrO + BaO	> 3,
ZnO	0 – < 2,
ZrO ₂	0 – 2,
TiO ₂	0 – 2,
with ZrO ₂ + TiO ₂	0 – 2,
As ₂ O ₃	0 – 1.5,
Sb ₂ O ₃	0 – 1.5,
CeO ₂	0 – 1.5,
Cl ⁻	0 – 1.5,
F ⁻	0 – 1.5,
SO ₄ ²⁻	0 – 1.5, and
wherein As ₂ O ₃ + Sb ₂ O ₃ + CeO ₂ + Cl ⁻ + F ⁻ + SO ₄ ²⁻	0 – 1.5,

and essentially no alkali oxides.

50. (Cancelled)

51. (Previously Presented) An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

<u>SiO₂</u>	> 58 – 65,
<u>B₂O₃</u>	> 6 – 11.5,
<u>Al₂O₃</u>	> 14 – 20,
<u>MgO</u>	> 3 – 6,
<u>CaO</u>	> 4.5 – 10,
<u>SrO</u>	0 – < 4,
<u>BaO</u>	> 2.5 – 6,
with <u>SrO + BaO</u>	> 3,
<u>ZnO</u>	0 – 0.5,
<u>ZrO₂</u>	0 – 2,
<u>TiO₂</u>	0 – 2,
with <u>ZrO₂ + TiO₂</u>	0 – 2,
<u>As₂O₃</u>	0 – 1.5,
<u>Sb₂O₃</u>	0 – 1.5,
<u>CeO₂</u>	0 – 1.5,
<u>Cl⁻</u>	0 – 1.5,
<u>F⁻</u>	0 – 1.5,
<u>SO₄²⁻</u>	0 – 1.5, and
wherein <u>As₂O₃ + Sb₂O₃ + CeO₂ + Cl⁻ + F⁻ + SO₄²⁻</u>	0 – 1.5,

and essentially no alkali oxides.

52-62. (Cancelled)

63. (Currently Amended) An alkali-free aluminoborosilicate glass according to claim 6 that does not contain SnO₂ or ZrO₂ An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

<u>SiO₂</u>	> 58 – 65,
<u>B₂O₃</u>	> 6 – 11.5,
<u>Al₂O₃</u>	> 14 – 20,
<u>MgO</u>	> 3 – 6,
<u>CaO</u>	> 4.5 – 10,
<u>SrO</u>	0 – 1.5,
<u>BaO</u>	> 1.5 – 6,
with <u>SrO + BaO</u>	> 3,
<u>ZnO</u>	0 – < 2,
<u>ZrO₂</u>	0 – 2,
<u>TiO₂</u>	0 – 2,
with <u>ZrO₂ + TiO₂</u>	0 – 2,
<u>As₂O₃</u>	0 – 1.5,

<u>Sb₂O₃</u>	<u>0 – 1.5,</u>
<u>SnO₂</u>	<u>0 – 1.5,</u>
<u>CeO₂</u>	<u>0 – 1.5,</u>
<u>Cl⁻</u>	<u>0 – 1.5,</u>
<u>F⁻</u>	<u>0 – 1.5,</u>
<u>SO₄²⁻</u>	<u>0 – 1.5, and</u>
<u>wherein As₂O₃ + Sb₂O₃ + SnO₂ + CeO₂ + Cl⁻ + F⁻ + SO₄²⁻</u>	<u>0 – 1.5,</u>

and essentially no alkali oxides, and does not contain SnO₂ or ZrO₂.

64. (Currently Amended) An alkali free aluminoborosilicate glass according to claim 20 that does not contain SnO₂ or ZrO₂. An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

<u>SiO₂</u>	<u>> 58 – 65,</u>
<u>B₂O₃</u>	<u>> 6 – 11.5,</u>
<u>Al₂O₃</u>	<u>> 14 – 20,</u>
<u>MgO</u>	<u>> 3 – 6,</u>
<u>CaO</u>	<u>> 4.5 – 10,</u>
<u>SrO</u>	<u>0 – < 4,</u>
<u>BaO</u>	<u>> 2.5 – 6,</u>
<u>with SrO + BaO</u>	<u>> 3,</u>
<u>ZnO</u>	<u>0 – 0.5,</u>
<u>ZrO₂</u>	<u>0 – 2,</u>
<u>TiO₂</u>	<u>0 – 2,</u>
<u>with ZrO₂ + TiO₂</u>	<u>0 – 2,</u>
<u>As₂O₃</u>	<u>0 – 1.5,</u>
<u>Sb₂O₃</u>	<u>0 – 1.5,</u>
<u>SnO₂</u>	<u>0 – 1.5,</u>
<u>CeO₂</u>	<u>0 – 1.5,</u>
<u>Cl⁻</u>	<u>0 – 1.5,</u>
<u>F⁻</u>	<u>0 – 1.5,</u>
<u>SO₄²⁻</u>	<u>0 – 1.5, and</u>
<u>wherein As₂O₃ + Sb₂O₃ + SnO₂ + CeO₂ + Cl⁻ + F⁻ + SO₄²⁻</u>	<u>0 – 1.5,</u>

and essentially no alkali oxides, and does not contain SnO₂ or ZrO₂.

65. (Currently Amended) An alkali free aluminoborosilicate glass according to claim 53 that does not contain SnO₂ or ZrO₂. An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,

<u>SiO₂</u>	<u>> 58 – 65,</u>
<u>B₂O₃</u>	<u>> 6 – 11.5,</u>
<u>Al₂O₃</u>	<u>> 14 – 20,</u>
<u>MgO</u>	<u>> 3 – 6,</u>
<u>CaO</u>	<u>> 4.5 – 10,</u>

<u>SrO</u>	<u>0 – 1.5,</u>
<u>BaO</u>	<u>> 1.5 – 6,</u>
<u>with SrO + BaO</u>	<u>> 3,</u>
<u>ZnO</u>	<u>0 – < 2,</u>
<u>ZrO₂</u>	<u>0 – 2,</u>
<u>TiO₂</u>	<u>0 – 2,</u>
<u>with ZrO₂ + TiO₂</u>	<u>0 – 2,</u>
<u>As₂O₃</u>	<u>0 – 1.5,</u>
<u>Sb₂O₃</u>	<u>0 – 1.5,</u>
<u>SnO₂</u>	<u>0 – 1.5,</u>
<u>Cl⁻</u>	<u>0 – 1.5,</u>
<u>F⁻</u>	<u>0 – 1.5,</u>
<u>SO₄²⁻</u>	<u>0 – 1.5, and</u>
<u>wherein As₂O₃ + Sb₂O₃ + SnO₂ + Cl⁻ + F⁻ + SO₄²⁻</u>	<u>0 – 1.5,</u>

and essentially no alkali oxides, and does not contain SnO₂ or ZrO₂.

66. (Currently Amended) ~~An alkali-free aluminoborosilicate glass according to claim 54 that does not contain SnO₂ or ZrO₂. An alkali-free aluminoborosilicate glass consisting of by weight % based on oxide,~~

<u>SiO₂</u>	<u>> 58 – 65,</u>
<u>B₂O₃</u>	<u>> 6 – 11.5,</u>
<u>Al₂O₃</u>	<u>> 14 – 20,</u>
<u>MgO</u>	<u>> 3 – 6,</u>
<u>CaO</u>	<u>> 4.5 – 10,</u>
<u>SrO</u>	<u>0 – < 4,</u>
<u>BaO</u>	<u>> 2.5 – 6,</u>
<u>with SrO + BaO</u>	<u>> 3,</u>
<u>ZnO</u>	<u>0 – 0.5,</u>
<u>ZrO₂</u>	<u>0 – 2,</u>
<u>TiO₂</u>	<u>0 – 2,</u>
<u>with ZrO₂ + TiO₂</u>	<u>0 – 2,</u>
<u>As₂O₃</u>	<u>0 – 1.5,</u>
<u>Sb₂O₃</u>	<u>0 – 1.5,</u>
<u>SnO₂</u>	<u>0 – 1.5,</u>
<u>Cl⁻</u>	<u>0 – 1.5,</u>
<u>F⁻</u>	<u>0 – 1.5,</u>
<u>SO₄²⁻</u>	<u>0 – 1.5, and</u>
<u>wherein As₂O₃ + Sb₂O₃ + SnO₂ + Cl⁻ + F⁻ + SO₄²⁻</u>	<u>0 – 1.5,</u>

and essentially no alkali oxides, and does not contain SnO₂ or ZrO₂.

67. (Currently Amended) ~~An alkali-free aluminoborosilicate glass according to claim 55 that does not contain SnO₂ or ZrO₂. An alkali-free aluminoborosilicate glass~~

consisting of by weight % based on oxide,

<u>SiO₂</u>	<u>> 58 – 65,</u>
<u>B₂O₃</u>	<u>> 6 – 11.5,</u>
<u>Al₂O₃</u>	<u>> 14 – 20,</u>
<u>MgO</u>	<u>> 3 – 6,</u>
<u>CaO</u>	<u>> 4.5 – 10,</u>
<u>SrO</u>	<u>0 – 1.5,</u>
<u>BaO</u>	<u>> 1.5 – 6,</u>
<u>with SrO + BaO</u>	<u>> 3,</u>
<u>ZnO</u>	<u>0 – < 2,</u>
<u>ZrO₂</u>	<u>0 – 2,</u>
<u>TiO₂</u>	<u>0 – 2,</u>
<u>with ZrO₂ + TiO₂</u>	<u>0 – 2,</u>
<u>As₂O₃</u>	<u>0 – 1.5,</u>
<u>Sb₂O₃</u>	<u>0 – 1.5,</u>
<u>SnO₂</u>	<u>0 – 1.5,</u>
<u>CeO₂</u>	<u>0 – 1.5,</u>
<u>Cl⁻</u>	<u>0 – 1.5,</u>
<u>F⁻</u>	<u>0 – 1.5,</u>
<u>SO₄²⁻</u>	<u>0 – 1.5, and</u>

wherein As₂O₃ + Sb₂O₃ + SnO₂ + CeO₂ + Cl⁻ + F⁻ + SO₄²⁻ 0 – 1.5,

and essentially no alkali oxides, and wherein the glass does not contain at least one of ZrO₂ or
TiO₂, and does not contain SnO₂ or ZrO₂.

68. (Currently Amended) An alkali-free aluminoborosilicate glass according to
claim 56 that does not contain SnO₂ or ZrO₂. An alkali-free aluminoborosilicate glass
consisting of by weight % based on oxide,

<u>SiO₂</u>	<u>> 58 – 65,</u>
<u>B₂O₃</u>	<u>> 6 – 11.5,</u>
<u>Al₂O₃</u>	<u>> 14 – 20,</u>
<u>MgO</u>	<u>> 3 – 6,</u>
<u>CaO</u>	<u>> 4.5 – 10,</u>
<u>SrO</u>	<u>0 – < 4,</u>
<u>BaO</u>	<u>> 2.5 – 6,</u>
<u>with SrO + BaO</u>	<u>> 3,</u>
<u>ZnO</u>	<u>0 – 0.5,</u>
<u>ZrO₂</u>	<u>0 – 2,</u>
<u>TiO₂</u>	<u>0 – 2,</u>
<u>with ZrO₂ + TiO₂</u>	<u>0 – 2,</u>
<u>As₂O₃</u>	<u>0 – 1.5,</u>
<u>Sb₂O₃</u>	<u>0 – 1.5,</u>
<u>SnO₂</u>	<u>0 – 1.5,</u>
<u>CeO₂</u>	<u>0 – 1.5,</u>

Cl⁻

0 - 1.5,

F⁻

0 - 1.5,

SO₄²⁻

0 - 1.5, and

wherein As₂O₃ + Sb₂O₃ + SnO₂ + CeO₂ + Cl⁻ + F⁻ + SO₄²⁻

0 - 1.5,

and essentially no alkali oxides, and wherein the glass does not contain at least one of ZrO₂ or

TiO₂, and does not contain SnO₂ or ZrO₂.